

# **PRODUCT SALES ANALYSIS**

## **Phase-II**

### **O**VERVIEW

In this project, We use Python Pandas and Python Matplotlib to analyze and answer business questions about 12 months worth of the sales data. The data contains hundreds of thousands of Super Market store purchases broken down by month, product type, cost, purchase occurs, etc.

## *PROBLEM SOLVING STATES*



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### **1) Product Quality Issues:**

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The quality of the product is one of the most common problems faced by customers while shopping online. When purchasing products online, you often do not know what you are

getting in terms of quality. Reviews are not necessarily reliable, and research can't give you 100% assurance of a good product's quality. Often, fraudulent sellers who purposefully mislead customers in order to boost sales are the primary reason behind faulty products being sold online.

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## The Solution:

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Customers will believe that the products are of top quality based on the clear approval marks awarded by external companies. Therefore, you can ensure that your online store is trustworthy by performing product inspections. Make sure to add the quality assurance certificate if any and also try to provide all the details about your product precisely.

As a retailer, make sure you don't compromise on product quality. Quality matters in every stage of the production line. If you produce higher quality goods, then you will eventually sell more products and earn higher profits later. Also, encourage customer feedback and ask them to share their detailed reviews along with some images or videos so that other customers can easily check their reviews a products and make a purchase decision.



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## **2) Search Function Not Working Properly:**

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You might agree with us that having a poor search function is one of the biggest drawbacks when it comes to online shopping. Sometimes it may take a long time to find what we're looking for, sometimes it might return a lot of irrelevant results. Either way, it becomes tedious and frustrating. When using an online shop to buy something, you expect to get exactly what you want at a good price; you do not expect to spend hours trying to find it!

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### **The Solution:**

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On-site search is one of the powerful features of your ecommerce store, so treat your site search solution as a great opportunity to drive more sales. Make sure that the search box is easy to spot and big enough for typical queries. Personalize search suggestions. Search query auto complete.

With the emergence of new technologies, such as artificial intelligence, machine learning, and natural language processing (NLP), retailers are now able to provide better results.

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## **3) Extra Hidden Charges:**

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When buying online, consumers often encounter surcharges for things like payment processing, delivery services, tax, shipping, and handling charges. Many sellers add extra charges to the final price of the product. Extra charges can make the difference between a winning deal and a losing one.



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## The Solution:

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Always display the total price including shipping charges, tax, handling fees, and all additional prices in it. Try not to have any hidden charges at checkout. Use Extra Fee Extension to your e-Commerce store to display the hidden charges or to add extra fees for additional services like gift wrap, rush orders, packing charges, etc. on orders.

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#### **4) Delayed Delivery:**

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This is quite a common problem that many people face while ordering online. Sometimes, the shipping company takes a long time to deliver your order. In case, you pay for express shipping, then the shipping companies often take longer than usual to deliver the goods.

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#### **The Solution:**

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If a customer knows when their product will get delivered and how many days are left until it gets delivered to them, where it currently is, they are much more likely to be satisfied with their purchase and also become repeat customers. Therefore, you need to provide the order tracking details, so that customers can easily track the progress of the shipment. If the order is delayed, then they contact customer service immediately.

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#### **5) Refund Policy:**

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While talking about online shopping problems faced by consumers, one of the major problems is when they try to get their returns back after they have paid for them. Some online companies refuse to refund the payment or give the money back, even if the customer asks for a refund.

There are lots of reasons why customers want to return their purchases and ask for a refund. Some of them include dissatisfaction with the item(s) purchased, items damaged during shipping, the wrong size of the item ordered, etc.

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#### **The Solution:**

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Make your refund policy as flexible as you can. Online stores should have a refund policy clearly stated on their site, so customers

know exactly what to expect if there's a problem. If your services and product are reliably good, you will rarely ever have to handle refunds, returns, and exchanges.

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## **6) Payment Failure:**

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Are you suffering from a “payment failure” issue with your online purchases or e-commerce websites? There could be several reasons behind a payment failure. One of them would be a website crash and the other can be your card number not being valid. Make sure that the credit card information entered by the customer is correct. If it is, then make sure you have enough funds in your account. Try changing payment methods if possible.

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### **The Solution:**

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Always make sure that your website has secure and safe payment options where online buyers are able to pay safely and securely. Always check that the service doesn't crash and that all the payments are processed properly and securely.

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## **7) Lack of Support:**

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One of the biggest issues faced by customers while buying their product/service online can be a lack of proper customer support. It may be due to the fact that they don't have enough time to take care of their problems, or they feel helpless. Sometimes, they face issues related to payment gateway details, billing, and shipping address. If any kind of problem arises, then the customer gets irritated and never comes back again.

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### **The Solution:**

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To tackle these issues, online stores should offer 24×7 customer [support services](#) and well-trained staff who can handle the inquiries of customers easily. So, if you want to make sure that your business becomes the one of choice among the users, you need to provide them with quality [e-commerce customer service](#). Using a Live [chatbot](#), Preparing an [FAQ](#) page, and providing support email addresses are a few of the best practices online business owners should try to enhance user experience.

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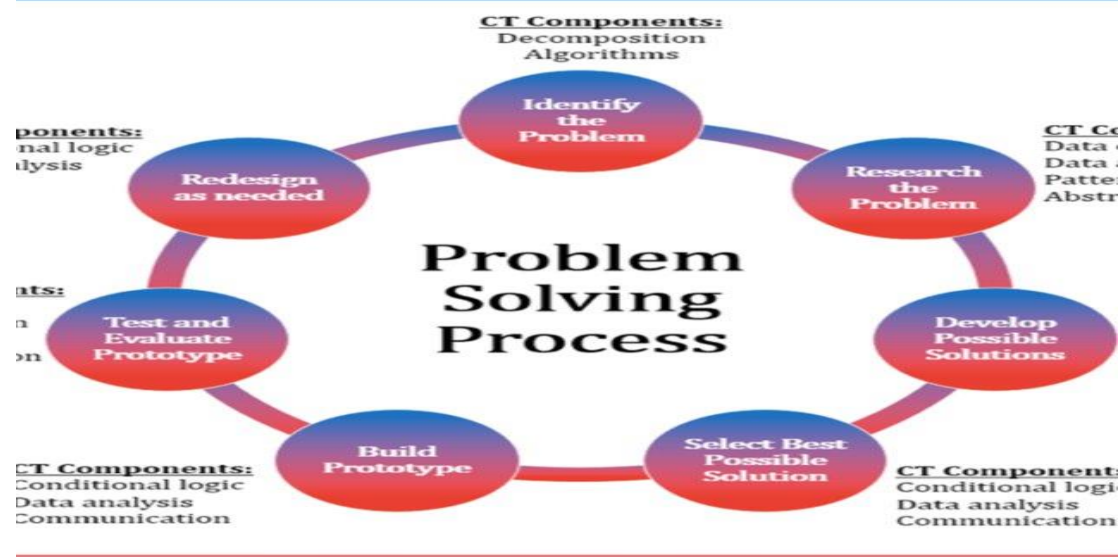
## 8) Missing Product Information:

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How often have you landed on a website only to realize they don't provide very clear information on their product or service? If you've ever felt frustrated or disappointed after reading something unclear, you're not alone. The term 'clarity' means different things to different people. Sometimes the products don't have their full description listed.

Without sufficient product details like features, descriptions, product benefits, and images, visitors are likely to get confused and go back to another site where they'll be able to get clearer information. Therefore, having proper product details on the website is essential. Don't let unclear information mislead potential buyers and cause them to leave your website before buying a product.



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## **The Solution:**

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The information provided should be enough to convince customers. You need to provide detailed product descriptions and pricing information. Also, you need to ensure that your product listing includes clear [product images](#).

Avoid using blurred or dummy images, especially if they're not related to your products. If you don't do this, potential customers may think that your products aren't authentic and that you might be trying to sell them counterfeit goods.

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## **9) Product Page Design:**

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As per the [State of Commerce 2021](#) report, one of the most critical elements of a brand's e-Commerce presence is Product Detail Pages.

A beautiful and well-designed ecommerce product page can only bring you gains, improve online visibility, and boost conversions, and that is why it is very essential to focus on the Product Page design of your e-Commerce store.

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## **The Solution:**

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Make sure that you have all the necessary elements like product title, overview, price, size details, CTAs, product gallery, reviews, product suggestions, etc on your product page.

Customers should be able to find your [product page design](#) much more attractive, visually impressive, responsive and with all the details they require on your Product Page.

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## 10) Lack of Payment Option:

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Lack of payment options is another issue faced by customers while purchasing online. There are times when options like cash on delivery are unavailable, or they even get confused on how to make the purchase if the debit card they use is not available as a payment option. Due to many fraud cases, people nowadays prefer cash-on-delivery options.

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### The Solution:

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The lack of payment options on the site is something that online e-Commerce store owners should have improved upon. It is highly recommended to offer a variety of payment methods. Payment options need to be secure and safe also. Payment methods must include cash, check, debit/credit card, BOPIS (Buy Now Pickup In-store), pre-paid cards, and buy now pay later.

[Contactless e-commerce](#) is one of the trending buzzwords in the e-Commerce industry. Contactless payments have become very popular, as they're faster, simpler, cheaper, and safer than swipe cards or PIN numbers. If you [operate an e-commerce store](#), these new technologies could give you a competitive edge over your competition. Contactless payment systems use near-field communication (NFC) technology and mobile phones to make transactions easier and faster. Many retailers are now using this to speed up their checkout processes.

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## 11) Complex Checkout Process

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A typical scenario in e-commerce websites is the complex checkout process. Customers often have a hard time understanding how they're going to pay for their order. And if it's not clear how they're going to complete the purchase, then you don't get those shoppers who end up buying things online.

This leads to customer frustration and abandonment. If your site takes too long or requires unnecessary steps, you're going to see fewer conversions.

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**The Solution:**

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This means that if you want to increase revenue, you need to streamline the checkout process. That's where a single-page checkout comes in handy. In addition to being user-friendly, a single-page checkout simplifies business processes. If you've got one thing that customers need to do, make sure it happens on one page. It makes sense. You can also optimize the checkout process using [checkout best practices](#) for your e-Commerce store.

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## **12) A Website is not Mobile Responsive :**

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Some websites don't open correctly on mobile phones, leading to frustration for customers. More than half of all visits to websites come from mobiles. Unfortunately, some websites aren't designed for viewing on mobile devices, and their pages often look terrible or don't function at all. This leads to problems for both consumers and store owners.

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### **The Solution:**

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[Mobile-friendly sites](#) are easier to read, navigate, and use on smart phones and tablets. They also load faster than those that aren't optimized for mobile devices. Make sure you design a website that is mobile responsive and can easily be used on any device.

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## **13) Security:**

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Security is always a concern when it comes to running a business online. While shopping online, customers often wonder whether personal information would be safe enough while being sent over the Internet. What if a hacker steals credit card numbers or bank details? Are they really protected from malicious apps and websites?

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### **The Solution:**

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Security measures on e-Commerce websites are essential to keep customers safe. These include things like encryption, anti-phishing tools, password management, fraud detection systems, and more.

Websites should ensure that only authorized users can access sensitive information. A good way to protect against unauthorized access is by using SSL encryption technology. Not only this, clearly communicate your privacy policy and obtain permission before storing data about customers. A clear and prominent privacy statement that lets users know what types of data you collect, why you collect it, and where it goes after you receive it. Additionally, you should get explicit user consent whenever possible.